UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND
TOXIC SUBSTANCES

Memorandum

DATE: May 29, 2002

SUBJECT: Biological and Economic Analysis of Diazinon on Table Beets

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PEER REVIEW DATE: May 22, 2002

SUMMARY

Based on a survey of published information, BEAD believes that the cancellation of diazinon for use on table beets have little or no impacts on growers or the industry. Use of diazinon has declined considerably since BEAD estimated a long-term average and now less than 1% of the crop area is treated. This implies that cost-effective control measures are available to growers.

LIMITATIONS AND SCOPE OF ANALYSIS

The scope of this analysis includes an examination of potential regional-level impacts associated with elimination (through a phase-out) of the use of diazinon on table beets. This mitigation scenario reflects the high health risks to mixers, loaders and applicators as identified by the Health Effects Division of the Office of Pesticide Programs. This analysis does not attempt to address impacts associated with mitigation efforts targeted at workers re-entering fields treated with diazinon, or potential mitigation for various environmental risks (i.e., risk mitigation for risks to terrestrial plants and organisms or water contamination).

There are limitations to this assessment. The impacts estimated by this analysis only represent potential short-term – 1 to 2 years – impacts on the table beet production system and grower returns. This analysis is based on a review of available USDA data and crop profiles and, given the minor amount of diazinon used, provides a qualitative rather than quantitative assessment.

CROP PRODUCTION

Table beets, produced primarily for canning, are a $7 million industry in the U.S (USDA/NASS, 2002). Between 1999 and 2001, production averaged 113.8 tons, almost 50% of which come from Wisconsin and another 30% from New York state. Nationally, a bit over 7,000 acres are devoted to table beets. Minor acreage is found in California, Minnesota and Oregon.

DIAZINON USAGE ON TABLE BEETS

Based on data from 1987 to 1997, BEAD (2000) estimated about 4,000 acres of beets, out of nearly 12,000 acres grown, were treated with diazinon. More recent data indicates not only a decline in the amount of acres cultivated in beets, but a drastic reduction in diazinon use. USDA/NASS (2001) do not quantify insecticide usage on table beets. NASS does indicate some usage of diazinon in New York, but does not report any usage in Wisconsin. The New York crop profile indicates less than 1% of the crop acres are treated. Available data indicate that less than 250 acres would be treated annually.

Target Insect Pests and Control

If diazinon were used in table beets, the most likely target pest scenario would be to control leaf miners for aesthetic reasons in table beets for the fresh market. An extremely heavy (and unlikely) infestation in table beets for processing may interfere with harvest by weakening the beet tops which are used to pull the roots.

IMPACTS OF CANCELLATION OF DIAZINON

BEAD believes that impacts from a cancellation of diazinon for use on table beets will be very small. The small fraction of acres treated indicates that the target pest is relatively unimportant or that cost-effective control measures are available. In particular, the decline in usage since the 1990s suggests that other control measures have largely replaced diazinon.

REFERENCES

BEAD (Biological and Economic Analysis Division), U.S. EPA, *Quantitative Usage Analysis for Diazinon*, November, 2000.

USDA, National Agricultural Statistic Service, *Agricultural Chemical Usage, Vegetable Summary*, various years.

USDA, National Agricultural Statistic Service, *Vegetables 2001 Summary*, January 2002.

Personal communication between Virginia Werling, EPA and Dr. Arlie McFaull, Cornell University on May 9, 2002.

Crop Profile: Beets in New York. Lee Stivers, Cornell University.